

## Taxonomic Notes on *Ophiopogon* of South Asia III

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*Ophiopogon marmoratus* L.Pierre ex L.Rodr. is treated as a synonym of *O. regnieri* Bois. *Ophiopogon regnieri* shows a wide variation especially in some leaf characters. *Ophiopogon tonkinensis* L.Rodr. differs from *O. regnieri* in some floral characters, though they appear to be closely related to each other.

(Continued from J. Jpn. Bot. 74: 25–33, 1999)

**Key words:** *Ophiopogon marmoratus*, *Ophiopogon regnieri*, *Ophiopogon tonkinensis*, taxonomy

### (4) *Ophiopogon regnieri* and *O. marmoratus*

Bois (1906) described *Ophiopogon regnieri* based on the living plant introduced by M. Régnier from Cochinchina (S Vietnam) (Figs. 1, 3A, 3B). Meanwhile, Rodriguez (1928) described *O. marmoratus* based on the specimen collected by L. Pierre in Cambodia (Figs. 2, 3C). According to Rodriguez (1934), the two species can be distinguished by leaf symmetry; i.e., leaves of *O. regnieri* are equilateral, while those of *O. marmoratus* are inequilateral. However, as far as I have examined the type specimens of the two species, the difference was insignificant. Leaf blades of both species are more or less inequilateral. Further, I could not find any significant difference in various characters between the two species, though their type specimens look fairly unlike each other (Figs. 1–3). Therefore, the two species are regarded here as conspecific, and *O. marmoratus* is reduced to a synonym of *O. regnieri*. *Ophiopogon regnieri* here circumscribed shows a large variation especially in some leaf characters.

The shape and size of leaf blades vary markedly among the specimens (e.g. Figs. 1, 2). While some specimens have broad, narrowly obovate or elliptic-oblong blades, others (e.g. Fig. 1) have slender, narrowly oblong ones. In the specimens with relatively broad blades [e.g. C.F.van Beusekom et al. 3690, K; H.B.G.Garrett 286, ABD, BM, K; C.Thorel 3356B ('B' was appended here to specify this sheet, since there is another specimen with the same collection number which is identified as a different species. For the latter specimen, C.Thorel 3356A, see Tanaka 1999), P] the lower surface of the blades is often distinctly marmorate (Fig. 4A), and transverse veinlets are often conspicuous on both sides of the blades (Fig. 4). On the contrary, in the specimens bearing narrow blades [e.g. A.F.G.Kerr 19109, P; R.Geesink et al. 5560, K; M.Régnier, P (Fig. 1)], both the marmorate pattern and the transverse veinlets tend to be indistinct.

***Ophiopogon regnieri*** Bois in Rev. Hort. 370 (1906); L.Rodr. in Lecomte, Fl. Génér. Indo-Chine 6: 659 (1934); P.H.Hô, Ill. Fl. Vietnam 3 (1): 585 (1993).

Lectotype is selected in the present study, refer to 'specimens examined' below.  
[Figs. 1-4]

*Ophiopogon marmoratus* L.Pierre (mss. in P) ex L.Rodr. in Bull. Soc. Bot. Fr. 75:

997 (1928); in Lecomte, Fl. Génér. Indo-Chine 6: 657 (1934); Char. in Thai For. Bull., Bot. 8: 92 (1974), saltem quoad specim. 'Garrett 286'.

*Mondo regnieri* (Bois) Farw. in Amer.

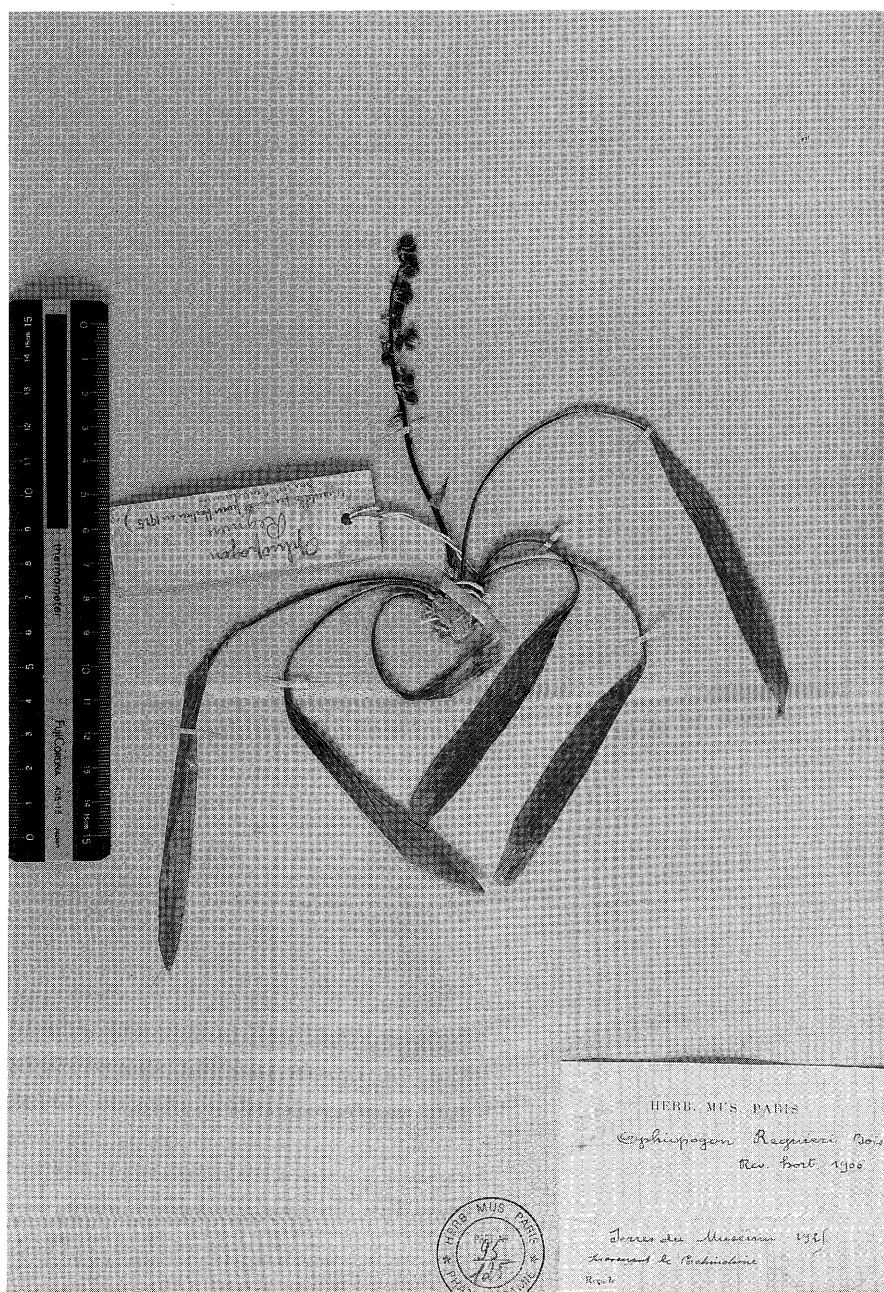


Fig. 1. Lectotype of *Ophiopogon regnieri* (S Vietnam, M. Régnier s.n., P).



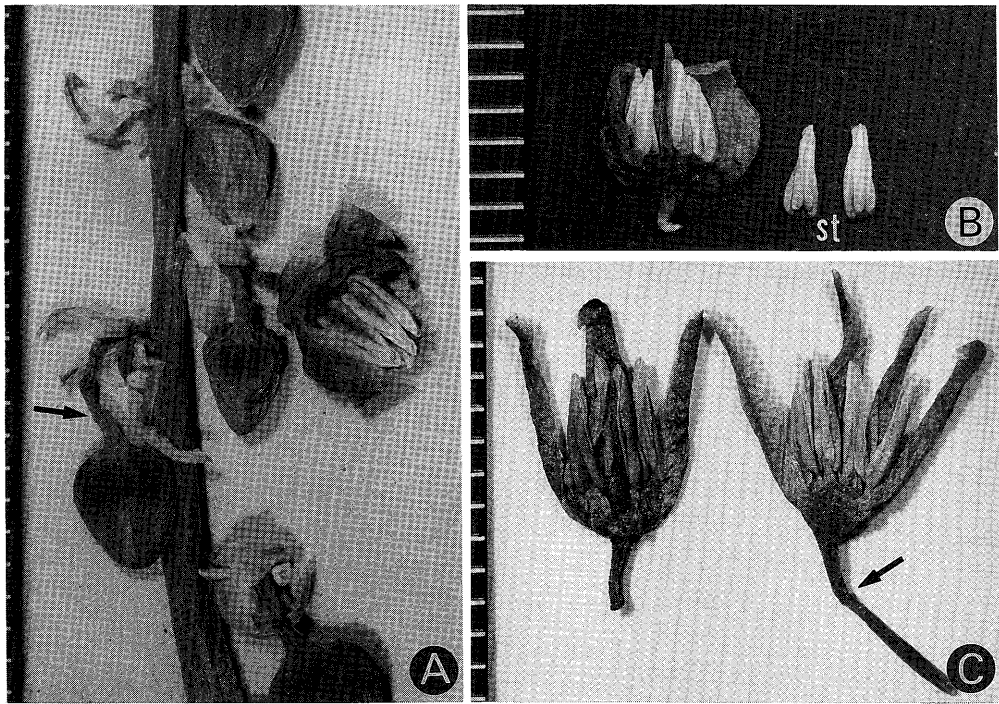


Fig. 3. Inflorescence and flowers of the type specimens of *Ophiopogon regnieri* and *O. marmoratus*. A. A part of the inflorescence of *O. regnieri* (M. Régnier s.n., P). B. A flower of *O. regnieri* (M. Régnier s.n., P). st: stamens. C. Two flowers of *O. marmoratus* (L.Pierre 7046, P). The arrows indicate the position of articulation on the pedicel. Scales in mm.

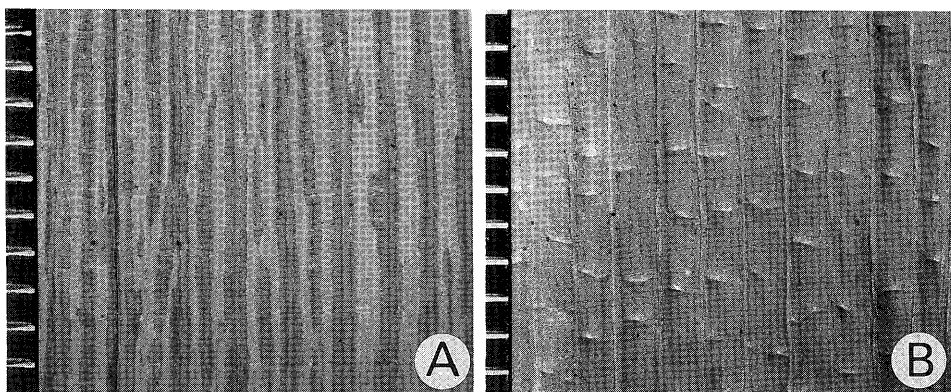


Fig. 4. Leaf surfaces of a specimen identified as *Ophiopogon regnieri* (Laos, C. Thorel 3356B, P). A. Abaxial surface of a leaf blade showing a marmorate pattern. Transverse veinlets are also faintly seen. B. Adaxial surface of a blade showing both longitudinal veins and transverse veinlets. Scales in mm.

elliptic-oblong, acute or acuminate at both ends, more or less inequilateral, entire or minutely serrulate on margins, glaucous and often marmorate on abaxial surface, usually subcoriaceous, 6.5–21 cm long, 0.9–4.1 cm wide, with 16–30 longitudinal veins, transverse veinlets often (or occasionally) prominent. Petioles 4–35 cm long, base with scarious wings. Scape erect or slightly nodding, 10–24 cm long, usually unwinged. Inflorescence racemose, 3.2–11.5 cm long. Flowers 1–3 in each bracteal axil, cernuous, secund, white (Garrett 286, K, BM, ABD; Geesink et al. 5560, K) or white tinted pink (Kerr 19109, P). Pedicels 3–8 mm long incl. lower stalky part of perianth (true pedicels, excl. perianth part, 2–6.5 mm long), articulated in upper part (occasionally in lower part in fruiting stage). Bracts ovate, acute or acuminate, scarious, to 9 mm long (in inflorescence). Perianth lobes 6, ovate to lanceolate-oblong, 1-nerved, 4–7 mm long, 2–3 mm wide. Stamens 6. Anthers free, introrse, lanceolate, saggitate or cordate at base, 2.7–4 mm long. Filaments short, free, 0.3–1 mm long. Pistil 1. Style columnar, slightly attenuate, slender, 3.6–5 mm long. Seeds with sarcotesta, globose, shortly acuminate at apex, 7.5 mm long, 5.5 mm across.

Distribution: Thailand, Cambodia, Laos and Vietnam. Also recorded from S China (Dai and Chen 1978).

Specimens examined:

**Thailand.** Peninsular, Trang, Pulien, alt. c.1000 m, Apr. 25, 1930, fl., A.F.G. Kerr 19109 (P); SW Prov., Kanchanaburi, alt. 750 m, Nov. 11, 1971, fr., C.F. van Beusekom et al. 3690 (K); N Prov., Tak, 20 km E of Mae Sod, alt. 500–700 m, May 30, 1973, fl., R. Geesink et al. 5560 (K); Chiang Rai, near foot of Doi Tam Tu Pu, north side, alt. c.390 m, May 16, 1926, fl., H.B.G. Garrett 286 (ABD, BM, K).

**Cambodia.** Mont Sral, Apr. 1870, fl., L. Pierre 7046 (type of *O. marmoratus*, P).

**Laos.** Pak lai (Pak lay), 1866–1868, fl., C. Thorel 3356B (P).

**Vietnam.** Cochinchine, M. Régner s.n., Serres du Muséum (cult.), 1925, fl. (lectotype of *O. regnieri*, here selected, P).

### (5) *Ophiopogon tonkinensis*

*Ophiopogon tonkinensis* was described by Rodriguez (1928) based on the specimen collected by M.E. Colani (P) in Tonkin (N Vietnam) (Figs. 5, 6). I had an opportunity to examine the type and the other specimen (M. Balansa 281, P) formerly identified as *O. tonkinensis* by Rodriguez (1934). *Ophiopogon tonkinensis* resembles *O. regnieri* (Figs. 1–4) in both vegetative and floral characters. But, the flowers of *O. tonkinensis* are smaller than those of *O. regnieri* (e.g., in *O. tonkinensis* tepals are 3.5 mm long and anthers 1.9–2.3 mm long, while in *O. regnieri* tepals are 4–7 mm long and anthers 2.7–4 mm long), and the number of flowers in each bracteal axil tends to be higher in *O. tonkinensis* (3–5) than in *O. regnieri* (1–3). Pedicels of *O. tonkinensis* are articulated in the lower part, while those of *O. regnieri* are jointed in the upper part in flowering time. By these differences *O. tonkinensis* appears to be distinguishable from *O. regnieri*. However, as the number of the specimens here examined is not enough, further surveys on the variation and the relationship of the two species are needed.

***Ophiopogon tonkinensis*** L. Rodr. in Bull. Soc. Bot. Fr. **75**: 998 (1928); in Lecomte, Fl. Génér. Indo-Chine **6**: 657 (1934); Anonym., Icon. Cormophyt. Sin. **5**: 525, f. 7880 (1976); L.K. Dai and S.C. Chen (for authorship see Chen et al. 1993) in F.T. Wang and Ts. Tang, Fl. Reip. Pop. Sin. **15**: 142 (1978); P.H. Hô, Ill. Fl. Vietnam **3** (1): 585 (1993); Y.P. Yang in C.Y. Wu, Fl. Yunnan. **7**: 673, t. 216, f. 3, 4 (1997). [Figs. 5 & 6]

Glabrous perennial herb. Rootstock short, estoloniferous, emitting fibrous roots 1–2.5 mm in diameter. Leaf blades oblong to narrowly elliptic, acuminate at both ends, inequilateral, entire, coriaceous, 9.5–21 cm long, 2.3–4.1 cm wide, with 24–34 longitudinal veins and numerous transverse veinlets, glaucous between longitudinal veins on



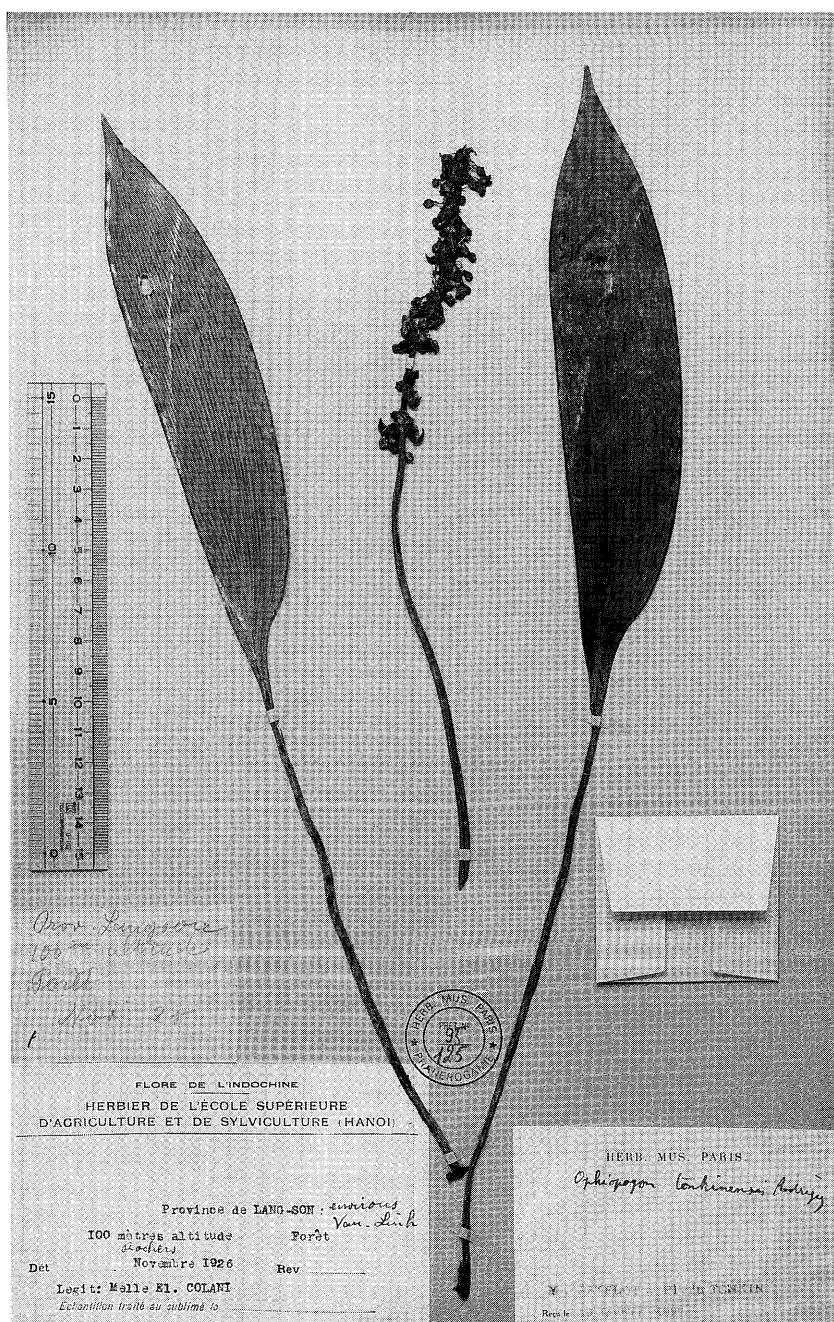


Fig. 5. Type specimen of *Ophiopogon tonkinensis* (N Vietnam, M. E. Colani s.n., P).



Fig. 6. A flower of *Ophiopogon tonkinensis* (N Vietnam, M. E. Colani s.n., type, P). Scale in mm.

abaxial surface. Petioles 8–20 cm long. Scape usually erect, unwinged. Inflorescence racemose. Flowers cernuous, 3–5 in each bracteal axil. Bracts ovate to lanceolate, scarious, to 12.5 mm long. Pedicels 7.4–8 mm long incl. lower stalky part of perianth (true pedicels, excl. perianth part, 2.1–3.5 mm long), articulate in lower part. Perianth lobes 6, ovate to ovate-oblong, 3.5

mm long, 2.0 mm wide. Stamens 6, free, ovate-lanceolate, introrse, 1.9–2.3 mm long. Filaments free, short, c.0.7 mm long. Pistil 1. Style filiform, slightly attenuate, 3–3.5 mm long.

Distribution: N Vietnam and SW China [SE Yunnan and W Guangxi (Anonymous 1976, Dai and Chen 1978, Yang 1997)].

Specimens examined:

**Vietnam.** Tonkin. Lang-Son, environs de Van-Linh, alt. 100 m, Nov. 1926, fl., M.E.Colani s.n., in herb. Pételot (**type of *O. tonkinensis***, P); Dong-Dang, Feb. 1886, fl., M. Balansa 281 (P).

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#### 田中教之：南アジア産ジャノヒゲ属の分類学的検討 III

*Ophiopogon regnieri* と *O. marmoratus* はこれまで別種として扱われてきた。しかし、両種の基準標本とこれらの種に分類しうる他の標本を検討したところ、両種を別種として扱うべき差異はとくに見出せなかった。それ故、両種を同一種として扱うことにした。この種の正名は *O. regnieri* であり、*O. marmoratus* はその異名となる。本種はとくに葉の性質(葉身の大きさ、形、横走脈や裏面の大理石状模様の現われ方など)に大きな変異がある。本種はタイ、カンボジア、ラオス、ベトナムに分布し、中国南部からも報告がある。

*Ophiopogon tonkinensis* の基準標本と本種に同定しうる他の標本を検討したところ次のような見解を得た。*O. tonkinensis* は *O. regnieri* と形態的に見てかなり近い位置関係にある。しかし *O. tonkinensis* は *O. regnieri* に比べて花が小さいこと、苞腋当たりの花数が多い傾向があること、花柄の関節が下部にあることなどによって区別できる。ただし、検討した両種の標本数は多くないので、両種の変異の実態を今後さらに詳しく調査する必要がある。本種はベトナム北部と中国西南部に分布している。  
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